

DESCRIPTIONS OF TWENTY-ONE SPECIES OF TURRIDÆ (PLEUROTOMIDÆ) FROM VARIOUS LOCALITIES IN THE COLLECTION OF MR. E. R. SYKES.

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Read 8th December, 1922.

PLATES IV AND V.

SOME time ago I was asked by Mr. Sykes to take in hand a number of unnamed and, in some cases, critical species of Turridæ, which he, as opportunity offered, had obtained from various sources. Fortunately, in every case the locality had been registered, and as regards the majority of them they had been closely examined, so far as comparison with the vast series of the British Museum (Nat. Hist.) was concerned, by himself in company with the late Mr. Edgar Smith. The Eastern Turridæ are particularly well represented there. The occidental tropical species, mostly from Cuba, have been, at our request, very kindly looked over by Dr. W. H. Dall, and also Mr. J. B. Henderson, to both of whom we are greatly indebted. About six of those forwarded were found to have been described, some quite recently, and the remainder were passed as new to science. We are enabled, therefore, to offer at the present opportunity descriptions of twenty-one species, a large proportion of these belonging to a genus *Drillia*, now being divided into sections, as is indeed necessary, but of which I am not prepared at present to grasp the full details. Accordingly, in this paper I fall back upon the old classification as given in Tryon's Manual of Conchology, vol. vi, 1884.

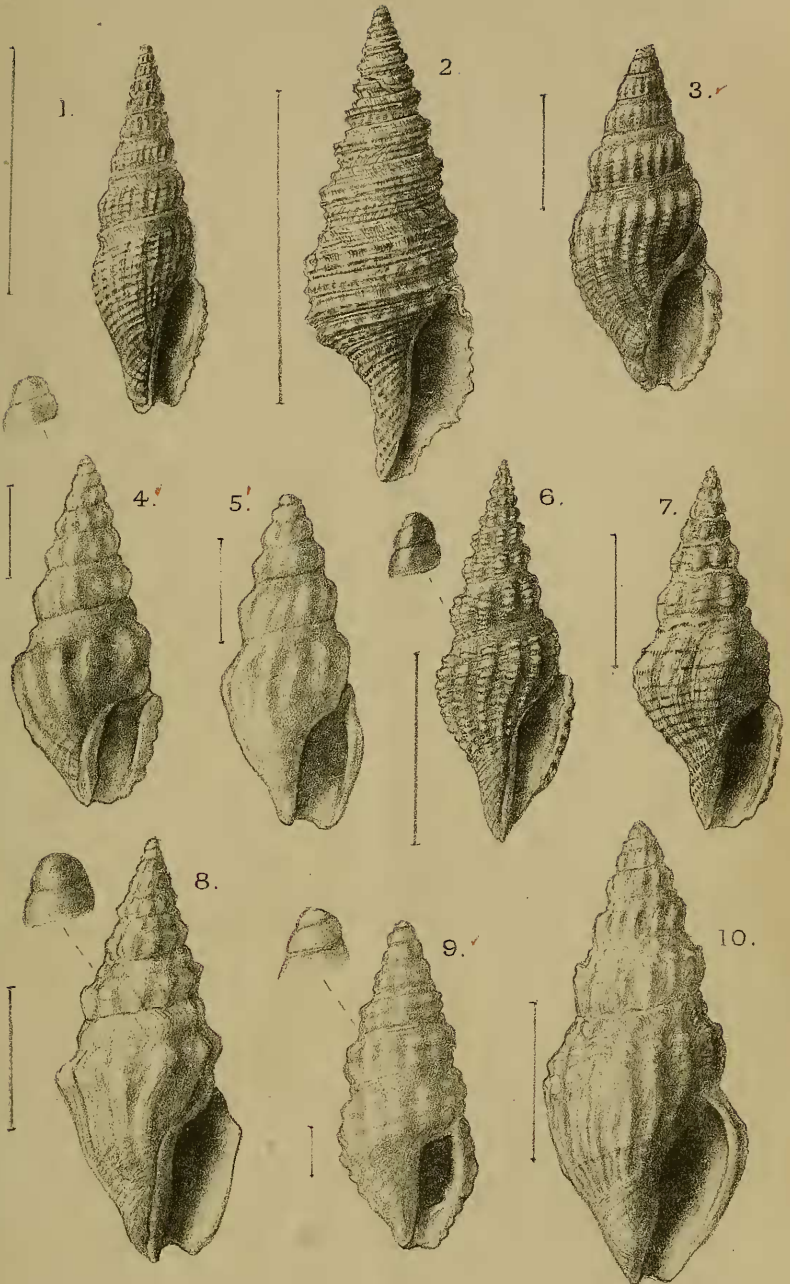
TURRIS RUTHVENIANA, n.sp. (Pl. IV, Fig. 2.)

Shell fusiform, thick; whorls, especially the upper, somewhat compressed, being ten in number, inclusive of the two apical. Colour bright chestnut brown, with squarrose, fairly regular, white tessellations on the spiral carinæ. These revolving keels appertain throughout—one, in particular, central, and subdivided by a shallow sulcus; the lesser tornate keels increase numerically in each of the lower whorls, till, on the body-whorl, they total five or six, all beautifully variegated with white and chestnut alternately, as mentioned above. Mouth ovate-oblong, canal wide, abbreviate, sinus well expressed, wide, and deep, columellar margin fairly straight.

Long. 41·5, lat. 14 mm.

Hab.—Mauritius.

A handsome species, standing somewhat alone, and conspicuous for its bright coloration and tessellated carinal ornamentation. (Named after Mr. E. Ruthven Sykes, in whose collection is the type.)



G.M. Woodward del. et lith.

Hath imp.

NEW SPECIES OF TURRIDÆ.

DRILLIA ANTHAMILLA, n.sp. (Pl. IV, Fig. 1.)

Shell narrowly fusiform, surface rather dull, blackish-fuscous, eleven whorled, of which the apical are smooth, shining, apparently carinate centrally, but the type specimen is a little worn and imperfect in this particular. The lower whorls are suturally impressed just below the sutures, at the summit of each whorl, once spirally acutely keeled, the remaining portion being rather ventricose, longitudinally obliquely multicostate, crossed by, on the four penultimate whorls, three to five spiral revolving lines, gemmulate at the several points of junction with the ribs; gemmules shining, often pale; the body-whorl possesses fourteen such liræ, with over twenty closely grained ribs. Mouth narrow, oblong, outer lip not effuse, columellar nearly straight, sinus shallow, but well expressed, canal slightly recurved.

Long. 34, diam. 9 mm.

Hab.—?

Mr. Edgar A. Smith considered this species an ally of *D. æmula*, Angas, from Australia, but the coloration is different, it is larger, with the body-whorl also longer in proportion to the length of spire. To my mind *D. maura*, Sowerby, a West American species, is akin, but the ribs seem more numerous, and the revolving lines stronger and better developed in the last-named shell. From the figure also of *D. appeli*, Weink,¹ one traces affinity, but this species is described as light-ochraceous in colour, and being indistinctly white banded. The general contour is, however, very similar. (*ἀνθάμιλλος* rivalling.)

DRILLIA CUBANA, n.sp. (Pl. IV, Fig. 3.) ✓

Shell elegantly fusiform, dark sienna-brown, whorls 8, nuclear? imperfect in our specimens, the remainder very closely and finely longitudinally costate, say about sixteen on the body-whorl, slightly oblique, warm-brown in colour, with spiral white band just below the sutures. The surface is crossed with uniform spiral raised lines; these extend very nearly to the base of the body-whorl. Mouth narrow, outer lip rather incrassate, sinus well expressed, just below the suture, columellar margin straight, canal very short.

Long. 15, lat. 6 mm.

Hab.—Cuba.

A striking little shell both in form and coloration. The ribs are particularly numerous and fine in character, not in the least incrassate. Indeed, it superficially recalls some small *Mitra* of the subgenus *Turricula*.

Dr. Dall considers it undescribed, and mentions that it belongs to a group of closely allied forms described by Reeve, Edgar Smith, Orbigny, and others, of some of which there are no authentic

¹ *Vide* Conch. Cab., pl. xx, fig. 5.

specimens in the United States National Museum, including the species now under review. Examples of the allied *D. leucocyma*,¹ Dall, and *zebra*, Lam., accompanied this from the island of Cuba, and are in Mr. Sykes' collection. Also two of the Orbignyian species, *D. ornata* and *albomaculata*.²

I have unusual pleasure in having the opportunity of naming this species after an island which I visited many years ago—in March, 1872—where a most happy and enjoyable time was spent in what is, perhaps, the most beautiful, as it is the largest, of the West Indies.

✓ *DRILLIA EUPHANES*, n.sp. (Pl. IV, Fig. 4.)

Shell fusiform, rather solid, white; whorls 8, of which two are nuclear, globular, white, smooth, the remainder suturally impressed, with regular incrassate nodulous longitudinal ribs, bluntly angled at the periphery, the nodules large, shining. The ribs on the body-whorl number eight or nine. These are crossed by somewhat coarse revolving lines, which, in the specimens before us, are nearly obsolete. Mouth roundly-ovate, sinus rather wide and deep, outer lip slightly expanded, columellar margin fairly straight, canal very short.

Long. 12, lat. 5 mm. sp. maj.; long. 9, lat. 4 mm. sp. min.

Hab.—Cuba.

Dr. Dall informs me that similar shells in the United States National Museum are labelled *fucata*, Reeve,³ but these are unauthenticated, and the name is therefore very doubtful. This Antillean species is larger, say 20–21 mm. in length, but much of the same character as to its ribs and general appearance. It is, however, channelled above the periphery, and the coloration is yellowish-white, with brown maculations. *D. paria*, Reeve,⁴ may also be compared. (*εὐφάνης* of good appearance.)

✓ *DRILLIA INNOCENS*, n.sp. (Pl. IV, Fig. 5.)

Shell fusiform, very smooth and shining, somewhat lightly built, pure white; whorls 7–8, of which the nuclear (two) are smooth and globose, the remainder all suturally impressed, with numerous irregularly formed longitudinal incrassate ribs; the rest of the surface smooth and plain. Mouth rather wide, ovate, outer lip thin, to some extent expanded, sinus situate directly below the suture, wide, columellar margin straight, canal very abbreviate.

Long. 14, lat. 6 mm. sp. maj.; long. 9, lat. 3·5 mm. sp. min.

Hab.—Cuba.

¹ Proc. U.S. Nat. Hist. Mus., vi, 1883, 328, pl. x, fig. 8.

² Orbigny, Moll. Cuba, pl. xxiv, fig. 16, and xxiii, fig. 26; Ramon de la Sagra, Hist. Cuba, ii, 1846, 176, pl. xxiv, figs. 16, 18.

³ Proc. Zool. Soc. Lond., 1845, p. 115; Conch. Icon. Pleurotoma, pl. xx, fig. 169.

⁴ Proc. Zool. Soc. Lond., 1846, p. 5; Conch. Icon. Pleurotoma, pl. xxxvi, fig. 334.

An elegant pure white and very smooth *Drillia*, which, as Dr. W. H. Dall observes, in form belongs to the same group as his *D. thea*,¹ this being an olivaceous species, with a silky epidermis, found off the Florida and contiguous coasts in about 60–100 fathoms.

DRILLIA INSIGNITA, n.sp. (Pl. IV, Fig. 6.)

Shell fusiform, gradually attenuate, incrassate, of a rich sienna-brown in colour; whorls 12, including three nuclear, smooth, shining brown, semidiaphanous, centrally carinate, the fourth whorl with numerous somewhat undeveloped noduled riblets, the remaining eight spirally ornamented with close revolving lines, crossing the conspicuously noduled longitudinal ribs; nodules white, body-whorl obliquely twelve-ribbed, below the periphery obscurely fasciated with white; canal somewhat extended, straight columellarly, outer lip effuse, sinus well marked, narrow, but deep.

Long. 25, diam. 10 mm.

Hab.—Philippine Islands.

Allied to *D. Griffithii*² and *major*,³ both of Gray, but smaller and more compact. (*Insignitus*, distinguished.)

DRILLIA LATIRIFORMIS, n.sp. (Pl. IV, Fig. 7.)

Shell fusiform, with fairly broadened body-whorl, but very attenuate spire; whorls 9, of which the two nuclear are smooth, diaphanous, and globular, the remainder with strong, rounded, shining, nodulous longitudinal ribs, about eight in number on the penultimate and body-whorls. Suturally strongly raised-plicate, and spirally furnished with regular raised revolving lines, chestnut in colour, thus contrasting with the paler ochreous brown surface; these raised striæ are very close and frequent on the body-whorl, especially below the periphery. Mouth oblong, outer lip somewhat thin, with sinus rather broad and deep. Columellar margin oblique, canal abbreviate.

Long. 17, lat. 6 mm.

Hab.—New Caledonia.

In the opinion of Mr. Edgar Smith, this very interesting species had not attained its maximum of growth. This may be the case; but, at all events, the outer lip, with the well-expressed sinus, is sufficiently formed for all practical purposes. The style of pattern is somewhat similar to the beautiful *Drillia euchroës*, Melv.,⁴ from the Persian Gulf, but that is smooth throughout. Both species are small mimics of *Latirus turritus*, Gmel., and others of that group.

¹ Proc. U.S. National Mus., vi, 1883, 328, pl. x, fig. 5.

² Reeve, Conch. Icon. Pleurotoma, pl. xix, fig. 157.

³ Reeve, Conch. Icon. Pleurotoma, pl. vii, fig. 59.

⁴ Proc. Malac. Soc. Lond., x, 1912, p. 250, pl. xi, fig. 11.

DRILLIA PARÆCA, n.sp. (Pl. IV, Fig. 8.)

Shell abbreviately fusiform, solid, white, the basal third of the body-whorl ochreous; whorls 9, including the smooth and globular nuclear, the remainder longitudinally many-ribbed, the ribs being stout, angled, and echinate, crossed by many faint revolving lines. The body-whorl is ten-ribbed. Mouth oblong, outer lip slightly expanded, columellar margin almost straight. Canal wide, abbreviate, sinus well expressed, wide, and fairly deep.

Long. 19, diam. 7 mm.

Hab.—?

Much stouter in build than *D. wilmeri*,¹ Smith, from the Andaman Isles, but is nearly allied, the ochreous or chestnut coloration in the lower portion of the body-whorl being very similar. This also obtains in the more recently described *D. infrafusca*² of Sowerby, a broader and coarser species still. (*παροιῶκος*, an ally.)

DRILLIA PRIMULA, n.sp. (Pl. IV, Fig. 9.)

Shell small, gradately fusiform, compact; whorls 8, of which the uppermost two are nuclear, smooth, white, globular, the remainder plicately ridged spirally at the sutures, and, below these, angularly sloping and closely longitudinally ribbed; ribs crossed, as regards the upper whorls, by two, the body-whorl by four or five spiral incrassate revolving lines, gemmulate, white, and shining at the points of junction with the ribs, interstices oblong. Shell of pale primrose hue, very delicate in colour. Mouth small, oval, outer lip slightly angled centrally and thickened. Columellar margin almost straight, sinus very obscure, canal abbreviate.

Long. 6, lat. 2 mm.

Hab.—Cuba.

Apparently of the same alliance as *D. papillosa*,³ Garrett, from Fiji, but not so pronounced in sculpture. Dimensions identical. (Primula, a primrose, from the pale lemon colour.)

DRILLIA (CRASSISPIRA) OCHROBRUNNEA, n.sp. (Pl. IV, Fig. 10.)

Shell oblong-fusiform, solid, yellow or ochreous-brown; whorls 8–9, of which the two nuclear are smooth, globose, blunt at actual apex, the remainder suturally impressed, angled, longitudinally multicostate; costæ smooth, crossed by obscure spiral lines on the body-whorl, more particularly towards the base. Whorls ornamented with spiral rows of white beaded gemmæ just below the sutures, and again in several regularly arranged rows on the ribs, and towards the base of the body-whorl. There is,

¹ Proc. Zool. Soc. Lond., 1878, p. 805, pl. 1, fig. 4.

² Proc. Zool. Soc. Lond., 1893, pp. 487 sqq. I may add that I have been able to examine the actual type of this species, *infrafusca*, which, formerly in General Tripe's collection, now belongs to Mr. Sykes.

³ Proc. Acad. Nat. Sci. Philadelphia, 1873, p. 218, pl. ii, fig. 29.

in the examples seen by us, some extent of variation in the disposition of these gemmæ, and likewise in the number of ribs. The mouth is ovate, outer lip slightly rounded in the largest specimen, straighter in the smaller, and with sinus shallow but well expressed. Columellar margin straight, canal very short, slightly recurved basally.

Long. 21, lat. 8 mm. sp. maj.; long 17, lat. 5 mm. sp. min.

Hab.—Mauritius.

This species exists, unnamed, in our National Museum. It is of the same alliance as *D. digitalis*,¹ Reeve, from the Philippine Isles and Mauritius, and *D. ochroleuca*,² Melv. & Sykes, from the Andamans (Booley collection).

CLAVATULA GABONENSIS, n.sp. (Pl. V, Fig. 11.)

Shell pyramidate, smooth throughout, eleven whorled, the two nuclear white, plain, and bulbous, the remainder concave, well exhibiting incremental lines of growth, elegantly and regularly ornamented with fluctuate brown lines, and, on the body-whorl, longitudinal flames; the periphery is conspicuously angular and bicarinate, mouth ovate, outer lip with median angle, sinus wide, canal moderate, very slightly recurved, columellar margin straight.

Long. 25, lat. 10 mm.

Hab.—Gaboon, West Africa.

To this the only allied species is *C. lelieuri*, Récluz.³ Both species agree in complete smoothness of surface, with no sign of tubercles or spines which characterize all others of the genus. But it differs from the species just named in the very conspicuous bicarinate angle at the periphery of the body-whorl, thereby rendering the shell attenuate at either extremity, while the character and disposition of the brown markings differ likewise.

PERRONA JESSICA, n.sp. (Pl. V, Fig. 12.)

Shell acuminately fusiform, shining, and very smooth; whorls 12, of which the two nuclear are transparent, white, and slightly bulbous; the remainder moderately suturally impressed, with a plicate and conspicuous revolving keel just below the suture, a plain space just below this, and then, joining on to the suture below, another carina raised and ornamented with a spiral row of small shining nodules. The body-whorl is almost straight, quite smooth, shining, and milky white until the close rows of striæ commence round the base. Canal prolonged and recurved, outer lip hardly incrassate, sinus wide and well-formed, columellar margin straight, mouth oblong.

¹ Reeve, Proc. Zool. Soc. Lond., 1843, p. 186; and Conch. Icon., i. Pleurotoma, pl. xvii, fig. 138.

² Proc. Malac. Soc. Lond., vol. ii, 1897, p. 165, pl. xiii, figs. 4, 5.

³ Journ. de Conchyl., ii, 1851, p. 210, pl. v, fig. 7.

Long. 28, lat. 9 mm.

Hab.—Goree, West Africa; collection Denans.

This extremely select species was examined by the late Mr. G. B. Sowerby, who wrote that at first he considered it might be an albino variety of *P. lineata*,¹ Lam., but that it was well distinguished from that species by the "plicate angle". It certainly seems abundantly distinct from any other known *Perrona*.

SURCULA MACILENTA, n.sp. (Pl. V, Fig. 13.)

Shell fusiform, gracefully attenuate, thin, pale tan-coloured; whorls 9–10, of which the two nuclear are pale, shining, and globose; the remainder medially angled, suturally impressed, longitudinally ribbed; ribs broad, rather irregular, rounded, oblique, the whole surface crossed very delicately by close revolving sulcose striæ. Mouth oblong, sinus (in type specimen) hardly expressed, but the shell may not have quite reached its full growth, the outer lip being thin. Columella straight, canal abbreviate, wide.

Long 17, lat. 5 mm.

Hab.—South Africa.

This appears nearly allied to *D. lanceolata*,² Reeve, and likewise to the much larger *Surcula undatiruga*,³ Biv., this being a Mediterranean species, of which *tenuis*, Gray, is a synonym.

(Macilenta, lean.)

✓ *MANGELIA INTERCEDENS*, n.sp. (Pl. V, Fig. 14.)

Shell fusiform, small, delicate, thin, white with partial pale yellow suffusion; whorls 7, of which three are nuclear, globose, semi-diaphanous, white, shining, the third being microscopically longitudinally striate; the remaining whorls, all impressed suturally, are closely longitudinally ribbed; these ribs are close, shining, and smooth, obliquely flexuose, with the interstices finely spirally striate. Mouth ovate-oblong, outer lip thin, but hardly adult, columellar margin oblique, canal abbreviate.

Long. 5, lat. 2 mm.

Hab.—Cuba.

A distinct species. Dr. Dall writes concerning it: "This belongs to the group of *cerina*, Kurtz & Stimpson,⁴ from the Atlantic shores of U.S.A. Though worn, we cannot identify it by any species in our collection." It may likewise be found comparable with another West Indian species, viz. *M. dorvilleæ*, Gray.⁵

(Intercedens, a go between.)

¹ Reeve, Conch. Icon. Pleurotoma, 1843, pl. xi, figs. 96a, b.

² Proc. Zool. Soc. Lond., 1845, p. 111. Also Reeve, Conch. Icon., i. Pleurotoma, pl. xxi, fig. 182.

³ Phil. Moll. Siciliæ, ii, pl. xxvi, fig. 13.

⁴ Proc. Boston Nat. Hist. Soc., iv, p. 115.

⁵ Reeve, Conch. Icon., i. Pleurotoma, pl. xxviii, fig. 249.

✓ *MANGELIA NANODES*, n.sp. (Pl. V, Fig. 15.)

Shell abbreviately fusiform, solid, yellowish white; whorls 6, two being nuclear, small, globular, the remainder ventricose, much impressed suturally, with longitudinal incrassate smooth ribs, the interstices crossed by coarse infrequent spiral lines; mouth oblong, outer lip thickened, sinus very obscure, columellar margin inclined to obliquity, canal extremely short.

Long. 5.5, lat. 3 mm.

Hab.—Cuba.

This petite *Mangilia*, in which the incrassate longitudinal ribs seem very large, proportionately speaking, is not to be found either in American or British Museums, and Dr. Dall queries it as most probably new to science. The whorls are very tumid, the spiral lines at the interstices coarse. (*νανώδης* dwarf.)

MANGELIA UMBROSA, n.sp. (Pl. V, Fig. 16.)

Shell small, narrow, fusiform, of rude sculpture, dusky-brown with rufous tinge over the body-whorl and orifice; whorls 7-8 (the nepionic being imperfect in the specimens seen), the remainder longitudinally furnished with obtusely-rounded, strong, and frequent ribs, say about fourteen on the body-whorl; all the whorls ventricose, impressed, and spirally plainly ridged suturally, and crossed by strongly developed spirals, swollen and almost becoming nodulous at the points of junction with the costæ. Mouth small, ovate, outer lip slightly expanded, sinus wide but shallow, canal very short, columellar margin oblique.

Long. 12, lat. 4 mm.

Hab.—Hirado Hegén, Japan (Hirase).

This small but roughened species was received from Mr. Y. Hirase through the medium of Messrs. Sowerby and Fulton, and studied well by the late Mr. G. B. Sowerby. We do not know a very near ally.

MANGELIA TANABENSIS, n.sp. (Pl. V, Fig. 17.)

Shell solid, white, longitudinally multicostate, ribs straight, at first, with the interstices, surrounded with deep revolving sulcate spiral lines, but soon becoming worn, and then are smooth and shining. One example is plain, without bands or coloured lines, another possesses two lines on the upper whorls, and on the body-whorl these are supplemented by a broad chestnut-brown band at the periphery, extending round the shell to the lower part of the outer lip. The mouth is ovate, outer lip white, shining, smooth, thickened, sinus small but well expressed, situate just below the suture. Canal abbreviate, columellar margin smooth.

Long. 14, lat. 4 mm. sp. maj.; long. 10, lat. 3.75 mm. sp. min.

Hab.—Tanabe Kü, Japan (Hirase, No. 1399).

A pretty, small, but solid shell, many ribbed, surrounded with sulcate revolving lines, the surface being sometimes plain and unrelieved, or lined and banded with chestnut-brown.